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09/802,296	03/08/2001	Scott Alan Stratmoen	NORTH-424A/A	3180

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EXAMINER
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APPIAH, CHARLES NANA

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 11/04/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/802,296

Applicant(s)

STRATMOEN ET AL.

Examiner

Charles Appiah

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on 2/24/03 and 8/21/03 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 8, 11, 12, 21, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by **Altschul et al. (6,144,847)**.

Regarding claim 1, Altschul discloses a communication system comprising a plurality of credit card-sized wireless long-range communication devices (wireless telephones 10), each of the long-range communication devices comprising: a receiver (50), an embedded antenna (34), a man-machine interface (visual indicator 62), an inherent processor, and a power supply (battery 40) wherein all of the credit card-sized wireless long-range communication inherently communicate with a single high-powered forward channel transmitter base station (see Figs. 1-3, col. 3, line 24 to col. 4, line 3).

Regarding claim 4, Altschul further shows wherein the device comprises a transmitter (see col. 3, lines 46-56).

Regarding claim 8, Altschul further discloses wherein the man-machine interface comprises a display (see visual indicator 62 of Fig. 1).

Regarding claim 11, Altschul further discloses that the man-machine interface comprises a pushbutton (see Fig. 1).

Regarding claim 12, Altschul further discloses that the power supply comprises a primary battery (see col. 4, lines 6-12).

Regarding claim 21, Altschul further discloses that the device is flexible, in that it can be used both as a telephone and as a credit card (see abstract).

Regarding claim 25, Altschul inherently teaches wherein all of the credit card sized wireless long-range communication devices communicate with the single high-powered forward channel transmitter based station using an interrogation protocol (see Fig. 4).

Regarding claim 26, Altschul's teaching of being able to pull the device through a conventional credit card reader (see Fig. 2, col. 4, lines 55-59) inherently reads on the device having a thickness of about 0.79mm.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Altschul et al** as applied to claim 1 above, and further in view of **Talisa et al. (5,878,334)**.

Regarding claim **2**, Altschul does not disclose that the base station comprises a high temperature superconductivity receiver.

Talisa teaches using a high temperature super conducting receiver that provides minimal loss and compact receiver front-end components (see col. 1, lines 8-12).

It would therefore have been obvious to one of ordinary skill in the art to modify Altschul's base station to comprise Talisa's receiver in order to provide minimal loss and compact receiver front-end components.

6. Claims 5-7, 10, 13-16, 22, 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Altschul et al**.

Regarding claim 5, Altschul discloses all of the limitations of claim 1, but does not specifically disclose that the receiver comprises a frequency shift-keying receiver.

Examiner takes Official notice that is very well known in the art that frequency shift keying receivers have high immunity to noise and interference and as such it would have been obvious to one of ordinary skill in the art to modify Altschul such that the receiver is a frequency shift keying receiver for the benefit of providing high immunity to noise and interference.

Regarding claims 6 and 7, Altschul meets all limitations as applied above to claim 1, but fails to explicitly teach that the receiver comprises a direct sequence spread spectrum receiver and that the direct sequence spread spectrum modulator comprises differential phase shift keying.

However, it is very well known in the art that direct sequence spread spectrum communication is highly resistant to RF interference, fading, multi-path, and jamming, and that direct sequence spread spectrum modulation techniques using phase shift keying provides a low error rate and is simple to implement..

Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art to modify Altschul, such that the receiver comprises a direct sequence spread spectrum modulator using differential phase shift keying, in order to provide communication, which is highly resistant to RF interference, fading, multi-path and jamming which is easy to implement and has low error rate.

Regarding claim 10, Altschul further discloses that the display is capable of displaying textual information (airtime availability, see col. 4, lines 4-12). Altschul fails to disclose the display is capable of displaying graphical information.

However, examiner takes Official Notice that it is very well known in the art to provide telephone displays having graphical information display capability and as such it would have been obvious to one of ordinary skill in the art to modify Altschul's telephone such that the display is capable of displaying graphical information, in order to provide more information and options to a user.

Regarding claims 13-15, Altschul meets all limitations as applied to claims 1 and 12 above, but does not specifically teach that the primary battery is a lithium non-rechargeable battery and that the power supply comprises a secondary battery, which is a lithium rechargeable battery.

However, it is a very well known practice in the art that a lithium battery is light weight and has good conductivity and high voltage and also it is known in the art to provide secondary or back-up rechargeable sources of power to portable communications device in order to keep the device powered when a primary power supply fails, and as such it would therefore have been obvious to one of ordinary skill in the art to use a primary power source such as a lithium non-rechargeable battery as well as a secondary battery in order to provide a power source which is light, has good conductivity and high voltage and also provision of backup power in case the primary power source fails.

Regarding claim 16, Altschul fails to teach that the power supply comprises a constant current source charger.

Examiner takes Official Notice that in the art to provide a charger to constantly keep a secondary power source supplied and a low dropout analog regulator extends the life of a battery. Therefore it would have been obvious to one of ordinary skill in the art to modify Altschul, such that the power supply comprises a low dropout analog regulator in order to extend the life of the battery for powering the electronic device.

Regarding claim 22, Altschul discloses all the limitations of claim 1, but does not disclose that the device can communicate in the range of about 30 kilometers. However, it is well known in the art to have communication devices having a range of about 30 kilometers. It would therefore have been obvious to one of ordinary skill in the art to have a communication system having a range such as 30 kilometers in order to provide the user with a high degree of mobility.

Regarding claim 23, Altschul fails to disclose that the base station is located in an aircraft. However, it is very well known in the art to use satellite base stations to provide coverage to wireless telephones in remote and secluded areas. It would therefore have been obvious to one of ordinary skill in the art to locate a base stations in any limited area such as in an aircraft, in order to provide communications in that limited area such as in an aircraft.

Regarding claim 27, Altschul teaches that, combining the phone device's wireless communications with the convenience and versatility of a credit card enables a more convenient easily carried and increased versatility in the use of a wireless communications device and reduces the number of devices carried by a user (see col. 6, lines 50-67). Altschul, however, fails to specifically teach that the credit card-sized wireless communication system has a length of about 9.6mm, a width of about 6.4mm

However, since Altschul teaches a single conveniently carried device that combines the versatility of a credit card and wireless telephonic communications, it would have been obvious to one of ordinary skill in the art to provide the conveniently carried credit card-sized device with any convenient dimensions subject to design and circuit constraints.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Altschul et al** as applied to claim 8 above, and further in view of **Cheung et al. (6,541,908)**.

Regarding claim 9, Altschul fails to teach that the display is a thin polymer emissive display.



Cheung discloses the manufacture of electronic light emissive displays.

According to Cheung combining an emissive display in which the light emitting medium comprises a light emitting organic polymer (see col. 10, lines 25-53), with control electronics is particularly useful for miniature display applications which provides high resolution and low cost particularly desired for wireless or mobile applications where low power and high efficiency can minimize weight and increase battery life (see col. 4, lines 5-37).

It would therefore have been obvious to one of ordinary skill in the art to provide the organic polymer emissive display application as the display in Altschul's communication device in order to have a miniature display with high resolution and low cost.

8. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Altschul et al** as applied to claim 1 above, and further in view of **Spall et al**. (6,097,934).

Regarding claims 17-19 Altschul does not specifically disclose that the antenna is either a monopole, dipole or patch antenna.

Spall discloses that monopole, dipole and patch antennas are all suitable for use with radiotelephones (see col. 5, lines 31-41).

It would therefore have been obvious to one of ordinary skill in the art to modify Altschul with Spall's antennas such that the antenna is either a monopole, dipole or patch antenna, in order to provide a suitable antenna as desired by the portable device application.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Altschul et al** as applied to claim 1 above, and further in view of **Kikinis (5,728,031)**.

Regarding claim 20, Altschul further discloses that the device comprises a microphone (see 22 of Figs. 1 and 3). Altschul does not disclose that the device comprises an integrated broadband processor. However, it is a well-known practice in the art to provide a communication device with an integrated broadband processor, in order to provide the user with the capability to run high-bandwidth applications. It would therefore have been obvious to one of ordinary skill in the art to use an integrated broadband processor, in order to provide the user the capability to run high-bandwidth applications.

Altschul as modified does not disclose that the device has voice-response architecture. Kikinis discloses a wireless communications device that comprises a voice-response architecture which allows a user to input information into the device via voice (see col. 17, line 53 to col. 18, line 3).

It would therefore have been obvious to one of ordinary skill in the art to modify Altschul with Kikinis, such that the device has a voice response capability in order to provide a user with optional convenient method for entering information into the device.

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Altschul et al** as applied to claim 1 above, and further in view of **Dennison et al. (5,235,633)**.

Regarding claim 24, Altschul fails to teach that the wireless communications device receives its location from GPS and uploads the location information to the base station.

Dennison discloses a wireless telephone that receives its location from a GPS system and uploads the location information to a base station, for the purpose of handing off the telephone to a cell site that is the most appropriate for its location (see abstract).

It would therefore have been obvious to provide GPS for providing location that is uploaded to a base station for the benefit of handing off the device to a cell site that is appropriate and provides good quality communications.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bartholomew et al. (5,724,417) discloses the use of a communication unit RF transceiver in conjunction with a smart card for call forwarding. Akiyama et al. (4,680,785) a personal ID-card type portable device for communicating personal information.

Rebstock et al. (5,877,675) discloses a wireless healthcare communication system that uses a small wearable portable device for communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Appiah whose telephone number is 703 305-4772. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2686

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.

CA  
October 28 2003



**CHARLES APPIAH  
PRIMARY EXAMINER**